| IPD96D1 Relay - Software Versions (1.22) |                             |       |  |        |                |        |         |        |         |        |          |                  |        |                       |                |
|--|-----------------------------|-------|--|--------|----------------|--------|---------|--------|---------|--------|----------|------------------|--------|-----------------------|----------------|
| IPR96D1 - MODBUS MEMORY MAP              |                             |       |  |        |                |        |         |        |         |        |          |                  |        |                       |                |
| Add (Hex)                                | MODBUS<br>REG. ADD<br>(Dec) | Size  | Description                                | Unit   | Min            | Step 1 | Level 1 | Step 2 | Level 2 | Step 3 | Мах      | Initial<br>Value | Format | Associated<br>Command | Read/<br>Write |
| 0000                                     | 300001                      | 1 W   | Product Code                               |        |                |        |         |        |         |        |          | 72               | 2      |                       | R              |
| 0001                                     | 300002                      | 1 W   | Product Model                              |        |                |        |         |        |         |        |          | 1                | 2      |                       | R              |
| 0002                                     | 300003                      | 1 W   | Version Number                             |        |                |        |         |        |         |        |          | 1,22             | 6      |                       | R              |
| 0003                                     | 300004                      | 1 W   | Product Language                           |        |                |        |         |        |         |        |          | 1                | 2      |                       | R              |
| 0004                                     | 300005                      | 124 W | Reserved                                   |        |                |        |         |        |         |        |          |                  |        |                       |                |
| 0080                                     | 400129                      | 1 W   | Command Operation Code                     |        |                |        |         |        |         |        |          |                  | 1200   |                       | w              |
| 0081                                     | 400130                      | 1 W   | Command Password                           |        |                |        |         |        |         |        |          |                  | 2      |                       | w              |
| 0082                                     | 300131                      | 14 W  | Reserved                                   |        |                |        |         |        |         |        |          |                  |        |                       |                |
| 0090                                     | 400145                      | 2 W   | Date & Time Preset Data                    |        |                |        |         |        |         |        |          |                  | 6408   | 5                     | R/W            |
| 0092                                     | 400147                      | 10 W  | Reserved                                   |        |                |        |         |        |         |        |          |                  |        |                       |                |
| 009C                                     | 400157                      | 1 W   | Access Code Preset                         |        | 1111           | 1      |         |        |         |        | 9999     |                  | 10     | 13                    | R/W            |
| 009D                                     | 400158                      | 32 W  | Reserved                                   |        |                |        |         |        |         |        |          |                  |        |                       | -              |
| 00BD                                     | 400190                      | 8 W   | BLE Device Name Preset                     |        |                |        |         |        |         |        |          |                  | 6410   | 4                     | R/W            |
| 0100                                     | 400198                      | 59 W  | Reserved                                   |        | 1              | 1      |         |        |         |        | 10       | E                | 2      |                       |                |
| 0100                                     | 400257                      | 1 W   | Display Contrast                           |        |                | 1      |         |        |         |        | 10       | 5                | 2      |                       |                |
| 0101                                     | 400250                      | 1 W   | System Frequency                           | <br>H7 | 0              | 1      |         |        |         |        | 10       | 0                | 6401   |                       | RM             |
| 0102                                     | 400260                      | 1 W   | Ground CT Primary                          | Δ      | 5              | 5      |         |        |         |        | 5000     | 50               | 2      |                       | R/W            |
| 0104                                     | 400261                      | 1 W   | Command                                    |        | 0              | 1      |         |        |         |        | 3        | 1                | 7041   |                       | R/W            |
| 0105                                     | 400262                      | 1 W   | Out Of Service Relay                       |        | 0              | 1      |         |        |         |        | 1        | 0                | 7012   |                       | R/W            |
| 0106                                     | 400263                      | 1 W   | Reserved                                   |        |                |        |         |        |         |        |          |                  | -      |                       | -              |
| 0107                                     | 400264                      | 1 W   | Max Switching Current Config               |        | 0              | 1      |         |        |         |        | 1        | 1                | 6407   |                       | R/W            |
| 0108                                     | 400265                      | 1 W   | Max Switching Current                      | А      | 50             | 10     |         |        |         |        | 5000     | 400              | 2      |                       | R/W            |
| 0109                                     | 400266                      | 13 W  | Reserved                                   |        |                |        |         |        |         |        |          |                  |        |                       |                |
| 0116                                     | 400279                      | 1 W   | Trip Relay Mode                            |        | 0              | 1      |         |        |         |        | 1        | 0                | 902    |                       | R/W            |
| 0117                                     | 400280                      | 1 W   | Aux1 Relay Mode                            |        | 0              | 1      |         |        |         |        | 1        | 0                | 902    |                       | R/W            |
| 0118                                     | 400281                      | 1 W   | Aux2 Relay Mode                            |        | 0              | 1      |         |        |         |        | 1        | 0                | 902    |                       | R/W            |
| 0119                                     | 400282                      | 6 W   | Reserved                                   |        |                |        |         |        |         |        |          |                  |        |                       |                |
| 011F                                     | 400288                      | 1 W   | Trip Relay Pulse Time                      | ms     | 100            | 100    |         |        |         |        | 2000     | 200              | 2      |                       | R/W            |
| 0120                                     | 400289                      | 1 W   | Aux1 Relay Pulse Time                      | ms     | 100            | 100    |         |        |         |        | 2000     | 200              | 2      |                       | R/W            |
| 0121                                     | 400290                      | 1 W   | Aux2 Relay Pulse Time                      | ms     | 100            | 100    |         |        |         |        | 2000     | 200              | 2      |                       | R/W            |
| 0122                                     | 400291                      | 10 W  | Reserved                                   |        |                |        |         |        |         |        |          |                  |        |                       | <u> </u>       |
| 012C                                     | 400301                      | 1 W   | Digital Input 1 Function                   |        | 0              | 1      |         |        |         |        | 5        | 2                | 1230   |                       | R/W            |
| 012D                                     | 400302                      | 1 W   | Digital Input 2 Function                   |        | 0              | 1      |         |        |         |        | 5        | 1                | 1230   |                       | R/W            |
| 012E                                     | 400303                      | 13 W  | Reserved                                   |        |                |        |         |        |         |        |          |                  | 4040   |                       |                |
| 0136                                     | 400310                      | 1 W   | Ground Timed OverCurrent1 Relays           |        |                | 1      |         |        |         |        | 200      | 12               | 1210   |                       |                |
| 0130                                     | 400317                      | 1 W   | Ground Timed OverCurrent1 Curve            | 70     |                | 1      |         |        |         |        | 12       | 12               | 6016   |                       | R/W            |
| 013E                                     | 400319                      | 1 W   | Ground Timed OverCurrent1 Curve Multiplier |        | 01             | 0.1    |         |        |         |        | 20.0     | 1                | 4      |                       | R/W            |
| 013E                                     | 400320                      | 1 W   | Ground Timed OverCurrent1 Delay            | s      | 0.1            | 0.01   | 1       | 0.1    | 100     | 1      | 600      | 1                | 6      |                       | R/W            |
| 0140                                     | 400321                      | 20 W  | Reserved                                   |        | 0,1            | 0.01   |         | 0.1    |         |        |          |                  |        |                       |                |
| 0154                                     | 400341                      | 1 W   | Ground Timed OverCurrent2 Relays           |        | 0              | 1      |         |        |         |        | 7        | 0                | 1216   |                       | R/W            |
| 0155                                     | 400342                      | 1 W   | Ground Timed OverCurrent2 Pickup           | %      | 1              | 1      |         |        |         |        | 300      | 12               | 2      |                       | R/W            |
| 0156                                     | 400343                      | 1 W   | Ground Timed OverCurrent2 Curve            |        | 0              | 1      |         |        |         |        | 12       | 1                | 6016   |                       | R/W            |
| 0157                                     | 400344                      | 1 W   | Ground Timed OverCurrent2 Curve Multiplier |        | 0.1            | 0.1    |         |        |         |        | 20.0     | 1                | 4      |                       | R/W            |
| 0158                                     | 400345                      | 1 W   | Ground Timed OverCurrent2 Delay            | s      | 0,1            | 0.01   | 1       | 0.1    | 100     | 1      | 600      | 1                | 6      |                       | R/W            |
| 0159                                     | 400346                      | 20 W  | Reserved                                   |        |                |        |         |        |         |        |          |                  |        |                       |                |
| 016D                                     | 400366                      | 1 W   | Ground Inst. OverCurrent Relays            |        | 0              | 1      |         |        |         |        | 7        | 0                | 1216   |                       | R/W            |
| 016E                                     | 400367                      | 1 W   | Ground Inst. OverCurrent Pickup            | %CT    | 1              | 1      | 10      | 10     |         |        | 2000     | 120              | 2      |                       | R/W            |
| 016F                                     | 400368                      | 1 W   | Ground Inst. OverCurrent Delay             | ms     | 0              | 10     |         |        |         |        | 2000     | 0                | 2      |                       | R/W            |
| 0170                                     | 400369                      | 20 W  | Reserved                                   |        |                |        |         |        |         |        |          |                  |        |                       |                |
| 0184                                     | 400389                      | 1 W   | Breaker Failure Relays                     |        | 0              | 1      |         |        |         |        | 7        | 0                | 1216   |                       | R/W            |
| 0185                                     | 400390                      | 1 W   | Breaker Failure Delay                      | ms     | 10             | 10     |         |        |         |        | 2500     | 1000             | 2      |                       | R/W            |
| 0186                                     | 400391                      | 5 W   | Reserved                                   |        |                |        |         |        |         |        |          |                  |        |                       | <u> </u>       |
| 018B                                     | 400396                      | 1 W   | Mechanical Operations Relays               |        | 0              | 1      |         |        |         |        | 7        | 0                | 1216   |                       | R/W            |
| 018C                                     | 400397                      | 1 W   | Mechanical Operations Maximum              |        | 5              | 5      |         |        |         |        | 9995     | 3000             | 2      |                       | R/W            |
| 018D                                     | 400398                      | 10 W  |  |        | -              |        |         |        |         |        |          |                  | 0.107  |                       | -              |
| 0197                                     | 400408                      | 1 W   | System Events Config                       |        | 0              |        |         |        |         |        |          |                  | 6407   |                       |                |
| 0100                                     | 400409                      | 1 W   |  |        |                | 1      |         |        |         |        | 1        |                  | 6407   |                       | R/W            |
| 0199                                     | 400410                      | 1 10/ |  |        |                | 1      |         |        |         |        | 1        | 1                | 6407   |                       |                |
| 0100                                     | 400411                      | 5 \A/ | Reserved                                   |        | - <sup>-</sup> |        |         |        |         |        | <u> </u> |                  | 0407   |                       |                |
| DIAR                                     | 40041Z                      | 3 11  | 1/0301/04                                  |        | 1              | 1      | 1       |        | 1       |        |          |                  | 1      |                       |                |

| 01A0 | 400417 | 1 W   | Slave Address                     |   | 1    | 1    |    |     |     |   | 247  | 1 | 2    | R/W |
|------|--------|-------|-----------------------------------|---|------|------|----|-----|-----|---|------|---|------|-----|
| 01A1 | 400418 | 1 W   | Com (RS-485) Baud Rate            |   | 3    | 1    |    |     |     |   | 7    | 3 | 6409 | R/W |
| 01A2 | 400419 | 1 W   | Com (RS-485) Configuration        |   | 2    | 1    |    |     |     |   | 7    | 2 | 6414 | R/W |
| 01A3 | 300420 | 10 W  | Reserved                          |   |      |      |    |     |     |   |      |   |      |     |
| 01AD | 300430 | 8 W   | BLE Device Name                   |   |      |      |    |     |     |   |      |   | 6410 | R   |
| 01B5 | 300438 | 331 W | Reserved                          |   |      |      |    |     |     |   |      |   |      |     |
| 0300 | 300769 | 2 W   | IPR96D1 Date & Time               |   |      |      |    |     |     |   |      |   | 6408 | R   |
| 0302 | 300771 | 1 W   | Reserved                          |   |      |      |    |     |     |   |      |   |      |     |
| 0303 | 300772 | 1 W   | Output Relays Status              |   |      |      | 1  |     |     |   |      |   | 1211 | R   |
| 0304 | 300773 | 1 W   | Digital Input Status              |   |      |      |    |     |     |   |      |   | 6020 | R   |
| 0305 | 300774 | 2 W   | Pickup Flag                       |   |      |      |    |     |     |   |      |   | 6022 | R   |
| 0307 | 300776 | 2 W   | Status Flag                       |   |      |      | -  |     |     |   |      |   | 6023 | R   |
| 0309 | 300778 | 1 W   | Led Status                        |   |      |      |    |     |     |   |      |   | 6040 | R   |
| 030A | 300779 | 1 W   | Button Status                     |   |      |      |    |     |     |   |      |   | 6619 | R   |
| 030B | 300780 | 30 W  | Reserved                          |   |      |      |    |     |     |   |      |   |      |     |
| 0329 | 300810 | 2 W   | Ground RMS Current                | А | 0,00 | 0,01 | 10 | 0,1 | 100 | 1 | 1000 |   | 6    | R   |
| 032B | 300812 | 30 W  | Reserved                          |   |      |      |    |     |     |   |      |   |      |     |
| 0349 | 300842 | 1 W   | Last Trip Cause                   |   |      |      | -  |     |     |   |      |   | 1215 | R   |
| 034A | 300843 | 2 W   | Last Trip Date & Time             |   |      |      | -  |     |     |   |      |   | 6408 | R   |
| 034C | 300845 | 1 W   | Last Trip Decimal Second          |   |      |      | -  |     |     |   |      |   | 2    | R   |
| 034D | 300846 | 5 W   | Reserved                          |   |      |      |    |     |     |   |      |   |      |     |
| 0352 | 300851 | 2 W   | Last Trip Ground RMS Current      | А | 0,00 | 0,01 | 10 | 0,1 | 100 | 1 | 1000 |   | 6    | R   |
| 0354 | 300853 | 10 W  | Reserved                          |   |      |      |    |     |     |   |      |   |      |     |
| 035E | 300863 | 1 W   | Trip Counter                      |   |      |      |    |     |     |   |      |   | 2    | R   |
| 035F | 300864 | 1 W   | Ground OC Counter                 |   |      |      |    |     |     |   |      |   | 2    | R   |
| 0360 | 300865 | 1 W   | Opening Counter                   |   |      |      |    |     |     |   |      |   | 2    | R   |
| 0361 | 300866 | 671 W | Reserved                          |   |      |      |    |     |     |   |      |   |      |     |
| 0600 | 301537 | 1 W   | Last Event Number                 |   |      |      |    |     |     |   |      |   | 2    | R   |
| 0601 | 301538 | 2 W   | Last Event Date and Time          |   |      |      |    |     |     |   |      |   | 6408 | R   |
| 0603 | 301540 | 1 W   | Selected Event Number             |   |      |      |    |     |     |   |      |   | 2    | R/W |
| 0604 | 301541 | 1 W   | Selected Event Type               |   |      |      |    |     |     |   |      |   | 1215 | R   |
| 0605 | 301542 | 2 W   | Selected Event Date and Time      |   |      |      |    |     |     |   |      |   | 6408 | R   |
| 0607 | 301544 | 1 W   | Selected Event Decimal Second     |   |      |      |    |     |     |   |      |   | 2    | R   |
| 0608 | 301545 | 2 W   | Selected Event Ground RMS Current | Α | 0,00 | 0,01 | 10 | 0,1 | 100 | 1 | 1000 |   | 6    | R   |

| IPR96D1 DATA FORMATS |                |                |  |  |  |  |
|----------------------|----------------|----------------|--|--|--|--|
| Format               | Туре           | Value          | Definition   |  |  |  |
| F1                   | Integer        |                | Signed Integer Value   |  |  |  |
|                      | -              |                | Example: -123 saved as -123  |  |  |  |
|                      |                |                |  |  |  |  |
| F2                   | Integer        |                | Unsigned Integer Value   |  |  |  |
|                      |                |                | Example. 123 saved as 123  |  |  |  |
| F4                   | Integer        |                | Unsigned Integer Value with 1 decimals   |  |  |  |
|                      |                |                | Example: 1.0 saved as 10   |  |  |  |
|                      |                |                |  |  |  |  |
| F5                   | Integer        |                | Signed integer value with 2 decimals   |  |  |  |
|                      |                |                |  |  |  |  |
| F6                   | Integer        |                | Unsigned Integer Value with 2 decimals   |  |  |  |
|                      |                |                | Example: 1.00 saved as 100   |  |  |  |
| F10                  | Integer        |                | Insigned Integer Access Code Value Register Format                             |  |  |  |
| 110                  | integer        |                | Example: 1111 saved as 1111 (only digits 1~9 accepted, digit 0 is NOT ALLOWED) |  |  |  |
| F902                 | Integer        |                | Relay Mode   |  |  |  |
|                      |                | 0              | LATCHED  |  |  |  |
| E4044                | 16 Bito DitMar | 1              | PULSED   |  |  |  |
| F1211                |                | Bit 0          | Trip Output Relay { 0 = "De-energized", 1 = "Energized" }                      |  |  |  |
|                      |                | Bit 1          | Aux1 Output Relay { 0 = "De-energized" , 1 = "Energized" }                     |  |  |  |
|                      |                | Bit 2          | Aux2 Output Relay { 0 = "De-energized" , 1 = "Energized" }                     |  |  |  |
| E4040                | Integer        | Bit 3 ~ Bit 15 | Not Used   |  |  |  |
| F1210                | integer        | 0              |  |  |  |  |
|                      |                | 1              | T  |  |  |  |
|                      |                | 2              | -1-  |  |  |  |
|                      |                | 3              | T1-  |  |  |  |
|                      |                |                |  |  |  |  |
|                      |                | 6              | -12  |  |  |  |
|                      |                | 7              | T12  |  |  |  |
| F1230                | Integer        |                | Digital Input Function   |  |  |  |
|                      |                | 0              |  |  |  |  |
|                      |                | 2              | EXTERNAL RESET   |  |  |  |
|                      |                | 3              | ACTIVATE AUX1  |  |  |  |
| 50040                | lute were      | 4              | ACTIVATE AUX2  |  |  |  |
| F6016                | Integer        | 0              | Digital Protection Curve Deminition Format Configuration Register Format       |  |  |  |
|                      |                | 1              | ANSI Moderate Inverse  |  |  |  |
|                      |                | 2              | ANSI Normal Inverse  |  |  |  |
|                      |                | 3              | ANSI Very Inverse  |  |  |  |
|                      |                | 5              | IAC Moderate Inverse   |  |  |  |
|                      |                | 6              | IAC Normal Inverse   |  |  |  |
|                      |                | 7              | IAC Very Inverse   |  |  |  |
|                      |                | 8              | IAC Extreme Inverse  |  |  |  |
|                      |                | 9<br>10        | IEC Short Time   |  |  |  |
|                      |                | 11             | IEC B Very Inverse   |  |  |  |
|                      |                | 12             | IEC C Extreme Inverse  |  |  |  |
| F6020                | 16 Bits BitMap | Dira           | IPR96D1 Digital Input Status   |  |  |  |
|                      |                | Bit 0<br>Rit 1 | Digital Input 1{ U = "Deactivated" , 1 = "Activated" }                         |  |  |  |
|                      |                | Bit 2 ~ Bit 15 | Not Used   |  |  |  |
| F6022                | 32 Bits BitMap |                | IPR96D1 Pickup Flag Format   |  |  |  |
|                      |                | Bit 0          | Gnd Instant Overcurrent  |  |  |  |
|                      |                | Bit 1<br>Bit 2 | Grid Timed? Overcurrent  |  |  |  |
|                      |                | Bit 3          | Breaker Failure  |  |  |  |
|                      |                | Bit 4          | Mechanical Operation   |  |  |  |
|                      |                | Bit 5 ~ Bit 31 | Not Used   |  |  |  |
| F6023                | 32 Bits BitMap | Bit 0          | IPR96D1 Status Flag Format   |  |  |  |
|                      |                | Bit 1          | Gnd Timed1 Overcurrent   |  |  |  |
|                      |                | Bit 2          | Gnd Timed2 Overcurrent   |  |  |  |
|                      |                | Bit 3          | Breaker Failure  |  |  |  |
|                      |                | Bit 5 - Pit 40 | Mechanical Operation   |  |  |  |
|                      |                | Bit 13         | Setpoint Discrepancy   |  |  |  |
|                      |                | Bit 14         | Flash Busy   |  |  |  |
|                      |                | Bit 15         | ADC Failure  |  |  |  |

|   | -  |   |   |
|---|--|---|---|
|   |  | Bit 16  | BLE Failure   |
|   |  | Bit 17  | RAM Failure   |
|   |  | Bit 18  | Check Events  |
|   |  | Bit 19  | Max Switching Current   |
|   |  | Bit 20  | Out of Service  |
|   |  | Bit 21 ~ Bit 31   | Not Used  |
| F6040                                     | 16 Bits BitMap   |   | IPR96D1 Led Status  |
|   |  | Bit 0   | Status Led { 0 = "Off" , 1 = "On" }   |
|   |  | Bit 1   | Trip Led { 0 = "Off", 1 = "On" }  |
|   |  | Bit 2 ~ Bit 15  | Not Used  |
| F6401                                     | Integer  |   | System Frequency  |
|   |  | 0   | 50 Hz   |
|   |  | 1   | 60 Hz   |
| F6407                                     | Integer  |   | Events Enable/Disable   |
|   |  | 0   | Disable   |
|   |  | 1   | Enable  |
| F6408                                     | Integer  |   | Unix Timestamp  |
|   |  |   | This count starts at the Unix Epoch on January 1st, 1970 at UTC   |
| F6409                                     | String   |   | BaudRate Value  |
|   |  | 3   | 9600 Bps  |
|   |  | 4   | 19200 Bps   |
|   |  | 5   | 38400 Bps   |
|   |  | 6   | 57600 Bps   |
|   |  | 7   | 115200 Bps  |
|   |  |   |   |
| F6410                                     | String   |   | String  |
| F6410                                     | String   | BLE Name  | String Allowed characters: &()/0123456789:ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]_abcdefghijklmnopqrstuvwxyz  |
| F6410<br>F6414                            | String<br>Integer  | BLE Name  | String Allowed characters: &()/0123456789:ABCDEFGHIJKLMNOPQRSTUVWXYZ[]_abcdefghijklmnopqrstuvwxyz RS Port Configuration   |
| F6410<br>F6414                            | String<br>Integer  | BLE Name  | String Allowed characters: &()/0123456789:ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]_abcdefghijklmnopqrstuvwxyz  RS Port Configuration 8N1 (8 bits Data, Parity NONE, 1 bit Stop)  |
| F6410<br>F6414                            | String<br>Integer  | BLE Name  | String         Allowed characters: &()/0123456789:ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]_abcdefghijkImnopqrstuvwxyz         RS Port Configuration         8N1 (8 bits Data, Parity NONE, 1 bit Stop)         8N2 (8 bits Data, Parity NONE, 2 bit Stop)  |
| F6410<br>F6414                            | String<br>Integer  | BLE Name  | String         Allowed characters: &()/0123456789:ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]_abcdefghijkImnopqrstuvwxyz         RS Port Configuration         8N1 (8 bits Data, Parity NONE, 1 bit Stop)         8N2 (8 bits Data, Parity NONE, 2 bit Stop)         8E1 (8 bits Data, Parity EVEN, 1 bit Stop)   |
| F6410<br>F6414                            | String<br>Integer  | BLE Name<br>2<br>3<br>4<br>5  | String         Allowed characters: &()/0123456789:ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]_abcdefghijklmnopqrstuvwxyz         RS Port Configuration         8N1 (8 bits Data, Parity NONE, 1 bit Stop)         8N2 (8 bits Data, Parity NONE, 2 bit Stop)         8E1 (8 bits Data, Parity EVEN, 1 bit Stop)         8E2 (8 bits Data, Parity EVEN, 2 bit Stop)  |
| F6410<br>F6414                            | String<br>Integer  | BLE Name<br>2<br>3<br>4<br>5<br>6   | String         Allowed characters: &()/0123456789:ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]_abcdefghijklmnopqrstuvwxyz         RS Port Configuration         8N1 (8 bits Data, Parity NONE, 1 bit Stop)         8N2 (8 bits Data, Parity NONE, 2 bit Stop)         8E1 (8 bits Data, Parity EVEN, 1 bit Stop)         8E2 (8 bits Data, Parity EVEN, 2 bit Stop)         8O1 (8 bits Data, Parity ODD, 1 bit Stop)  |
| F6410<br>F6414                            | String<br>Integer  | BLE Name<br>2<br>3<br>4<br>5<br>6<br>7  | String         Allowed characters: &()/0123456789:ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]_abcdefghijklmnopqrstuvwxyz         RS Port Configuration         8N1 (8 bits Data, Parity NONE, 1 bit Stop)         8N2 (8 bits Data, Parity NONE, 2 bit Stop)         8E1 (8 bits Data, Parity EVEN, 1 bit Stop)         8E2 (8 bits Data, Parity EVEN, 2 bit Stop)         8O1 (8 bits Data, Parity DDD, 1 bit Stop)         8O2 (8 bits Data, Parity ODD, 1 bit Stop)  |
| F6410<br>F6414<br>F6619                   | String<br>Integer  | BLE Name 2 3 4 5 6 7  | String         Allowed characters: &()/0123456789:ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]_abcdefghijklmnopqrstuvwxyz         RS Port Configuration         8N1 (8 bits Data, Parity NONE, 1 bit Stop)         8N2 (8 bits Data, Parity NONE, 2 bit Stop)         8E1 (8 bits Data, Parity EVEN, 1 bit Stop)         8E2 (8 bits Data, Parity EVEN, 1 bit Stop)         8E2 (8 bits Data, Parity EVEN, 2 bit Stop)         8O1 (8 bits Data, Parity ODD, 1 bit Stop)         8O2 (8 bits Data, Parity ODD, 1 bit Stop)         Button Status   |
| F6410<br>F6414<br>F6619                   | String<br>Integer  | BLE Name<br>2<br>3<br>4<br>5<br>6<br>7<br>8<br>Bit 0                          | String         Allowed characters: &()/0123456789:ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]_abcdefghijklmnopqrstuvwxyz         RS Port Configuration         8N1 (8 bits Data, Parity NONE, 1 bit Stop)         8N2 (8 bits Data, Parity NONE, 2 bit Stop)         8E1 (8 bits Data, Parity EVEN, 1 bit Stop)         8E2 (8 bits Data, Parity EVEN, 2 bit Stop)         8O1 (8 bits Data, Parity ODD, 1 bit Stop)         8O2 (8 bits Data, Parity ODD, 1 bit Stop)         Button Status         Down {0 = "Not Pressed", 1 = "Pressed" }   |
| F6410<br>F6414<br>F6619                   | String<br>Integer  | BLE Name<br>2<br>3<br>4<br>5<br>6<br>7<br>7<br>Bit 0<br>Bit 1                 | String         Allowed characters: &()/0123456789:ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]_abcdefghijklmnopqrstuvwxyz         RS Port Configuration         8N1 (8 bits Data, Parity NONE, 1 bit Stop)         8N2 (8 bits Data, Parity NONE, 2 bit Stop)         8E1 (8 bits Data, Parity EVEN, 1 bit Stop)         8E2 (8 bits Data, Parity EVEN, 2 bit Stop)         8C1 (8 bits Data, Parity EVEN, 2 bit Stop)         8O1 (8 bits Data, Parity ODD, 1 bit Stop)         8O2 (8 bits Data, Parity ODD, 1 bit Stop)         Button Status         Down {0 = "Not Pressed", 1 = "Pressed" }         Up {0 = "Not Pressed", 1 = "Pressed" }   |
| F6410<br>F6414<br>F6619                   | String<br>Integer<br>16 Bits BitMap  | BLE Name<br>2<br>3<br>4<br>5<br>6<br>7<br>Bit 0<br>Bit 1<br>Bit 2             | String         Allowed characters: &()/0123456789:ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]_abcdefghijklmnopqrstuvwxyz         RS Port Configuration         8N1 (8 bits Data, Parity NONE, 1 bit Stop)         8N2 (8 bits Data, Parity NONE, 2 bit Stop)         8E1 (8 bits Data, Parity EVEN, 1 bit Stop)         8E2 (8 bits Data, Parity EVEN, 2 bit Stop)         8O1 (8 bits Data, Parity EVEN, 2 bit Stop)         8O2 (8 bits Data, Parity ODD, 1 bit Stop)         8O2 (8 bits Data, Parity ODD, 1 bit Stop)         8O2 (8 bits Data, Parity ODD, 1 bit Stop)         Button Status         Down { 0 = "Not Pressed", 1 = "Pressed" }         Function { 0 = "Not Pressed", 1 = "Pressed" }   |
| F6410<br>F6414<br>F6619                   | String<br>Integer<br>16 Bits BitMap  | BLE Name 2 3 4 5 6 7 Bit 0 Bit 1 Bit 2 Bit 3                                  | String         Allowed characters: &()/0123456789:ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]_abcdefghijklmnopqrstuvwxyz         RS Port Configuration         8N1 (8 bits Data, Parity NONE, 1 bit Stop)         8N2 (8 bits Data, Parity NONE, 2 bit Stop)         8E1 (8 bits Data, Parity EVEN, 1 bit Stop)         8E2 (8 bits Data, Parity EVEN, 2 bit Stop)         8O1 (8 bits Data, Parity EVEN, 2 bit Stop)         8O2 (8 bits Data, Parity ODD, 1 bit Stop)         8O2 (8 bits Data, Parity ODD, 1 bit Stop)         Button Status         Down { 0 = "Not Pressed", 1 = "Pressed" }         Function { 0 = "Not Pressed", 1 = "Pressed" }         Enter { 0 = "Not Pressed", 1 = "Pressed" }  |
| F6410<br>F6414<br>F6619                   | String Integer | BLE Name 2 3 4 5 6 7 Bit 0 Bit 1 Bit 2 Bit 3 Bit 4                            | String         Allowed characters: &()/0123456789:ABCDEFGHIJKLMNOPQRSTUVWXYZ[]_abcdefghijklmnopqrstuvwxyz         RS Port Configuration         8N1 (8 bits Data, Parity NONE, 1 bit Stop)         8N2 (8 bits Data, Parity NONE, 2 bit Stop)         8E1 (8 bits Data, Parity EVEN, 1 bit Stop)         8E2 (8 bits Data, Parity EVEN, 2 bit Stop)         8O1 (8 bits Data, Parity ODD, 1 bit Stop)         8O2 (8 bits Data, Parity ODD, 1 bit Stop)         8O2 (8 bits Data, Parity ODD, 1 bit Stop)         Button Status         Down { 0 = "Not Pressed", 1 = "Pressed" }         Function { 0 = "Not Pressed", 1 = "Pressed" }         Enter { 0 = "Not Pressed", 1 = "Pressed" }         Enter { 0 = "Not Pressed", 1 = "Pressed" }         Esc { 0 = "Not Pressed", 1 = "Pressed" }  |
| F6410<br>F6414<br>F6619                   | String Integer | BLE Name 2 3 4 5 6 7 Bit 0 Bit 1 Bit 2 Bit 3 Bit 4 Bit 5 ~ Bit 15             | String         Allowed characters: &()/0123456789:ABCDEFGHIJKLMNOPQRSTUVWXYZ[]_abcdefghijklmnopqrstuvwxyz         RS Port Configuration         8N1 (8 bits Data, Parity NONE, 1 bit Stop)         8N2 (8 bits Data, Parity NONE, 2 bit Stop)         8E1 (8 bits Data, Parity EVEN, 1 bit Stop)         8E2 (8 bits Data, Parity EVEN, 2 bit Stop)         8O1 (8 bits Data, Parity EVEN, 2 bit Stop)         8O2 (8 bits Data, Parity ODD, 1 bit Stop)         8O2 (8 bits Data, Parity ODD, 1 bit Stop)         BUton Status         Down { 0 = "Not Pressed", 1 = "Pressed" }         Function { 0 = "Not Pressed", 1 = "Pressed" }         Enter { 0 = "Not Pressed", 1 = "Pressed" }         Enter { 0 = "Not Pressed", 1 = "Pressed" }         Example         Example         Down { 0 = "Not Pressed", 1 = "Pressed" }         Enter { 0 = "Not Pressed", 1 = "Pressed" }         Enter { 0 = "Not Pressed", 1 = "Pressed" }         Example         Example         Example         Example         Example         All bits Parity Pressed", 1 = "Pressed" }         Example         Ressed         Button Status         Down { 0 = "Not Pressed", 1 = "Pressed" }         Example         Example         Exampl |
| F6410<br>F6414<br>F6619<br>F6619          | String Integer Integer Integer Integer Integer Integer Integer Integer   | BLE Name 2 3 4 5 6 7 Bit 0 Bit 1 Bit 2 Bit 3 Bit 4 Bit 5 ~ Bit 15             | String         Allowed characters: &()/0123456789:ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]_abcdefghijkImnopqrstuvwxyz         RS Port Configuration         8N1 (8 bits Data, Parity NONE, 1 bit Stop)         8N2 (8 bits Data, Parity NONE, 2 bit Stop)         8E1 (8 bits Data, Parity EVEN, 1 bit Stop)         8E2 (8 bits Data, Parity EVEN, 2 bit Stop)         8O1 (8 bits Data, Parity EVEN, 2 bit Stop)         8O2 (8 bits Data, Parity ODD, 1 bit Stop)         8O2 (8 bits Data, Parity ODD, 1 bit Stop)         BUtton Status         Down { 0 = "Not Pressed", 1 = "Pressed" }         Function { 0 = "Not Pressed", 1 = "Pressed" }         Enter { 0 = "Not Pressed", 1 = "Pressed" }         Enter { 0 = "Not Pressed", 1 = "Pressed" }         Esc { 0 = "Not Pressed", 1 = "Pressed" }         Not Used         IPR86D1 Out of Service Relay  |
| F6410<br>F6414<br>F6619<br>F6619<br>F7012 | String Integer Integer Integer Integer   | BLE Name 2 3 4 5 6 7 Bit 0 Bit 1 Bit 2 Bit 3 Bit 4 Bit 5 ~ Bit 15 0           | String         Allowed characters: &()/0123456789:ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]_abcdefghijklmnopqrstuvwxyz         RS Port Configuration         8N1 (8 bits Data, Parity NONE, 1 bit Stop)         8N2 (8 bits Data, Parity NONE, 2 bit Stop)         8E1 (8 bits Data, Parity EVEN, 1 bit Stop)         8E2 (8 bits Data, Parity EVEN, 2 bit Stop)         802 (8 bits Data, Parity ODD, 1 bit Stop)         802 (8 bits Data, Parity ODD, 1 bit Stop)         Button Status         Down { 0 = "Not Pressed", 1 = "Pressed" }         Function { 0 = "Not Pressed", 1 = "Pressed" }         Enter { 0 = "Not Pressed", 1 = "Pressed" }         Exc (0 = "Not Pressed", 1 = "Pressed" }         Exc (0 = "Not Pressed", 1 = "Pressed" }         Psed 1 Out Of Service Relay         NONE  |
| F6410<br>F6414<br>F6619<br>F7012          | String Integer Integer Integer Integer Integer Integer Integer Integer   | BLE Name 2 3 4 5 6 7 Bit 0 Bit 1 Bit 2 Bit 3 Bit 4 Bit 5 ~ Bit 15 0 1         | String         Allowed characters: &()/0123456789:ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]_abcdefghijklmnopqrstuvwxyz         RS Port Configuration         8N1 (8 bits Data, Parity NONE, 1 bit Stop)         8N2 (8 bits Data, Parity NONE, 2 bit Stop)         8E1 (8 bits Data, Parity EVEN, 1 bit Stop)         8E2 (8 bits Data, Parity EVEN, 2 bit Stop)         801 (8 bits Data, Parity EVEN, 2 bit Stop)         801 (8 bits Data, Parity ODD, 1 bit Stop)         802 (8 bits Data, Parity ODD, 1 bit Stop)         802 (8 bits Data, Parity ODD, 1 bit Stop)         802 (8 bits Data, Parity ODD, 1 bit Stop)         Button Status         Down { 0 = "Not Pressed", 1 = "Pressed" }         Up { 0 = "Not Pressed", 1 = "Pressed" }         Enter { 0 = "Not Pressed", 1 = "Pressed" }         Esc { 0 = "Not Pressed", 1 = "Pressed" }         Not Used         IPR96D1 Out of Service Relay         NONE         AUX2   |
| F6410<br>F6414<br>F6619<br>F7012<br>F7041 | String Integer Integer Integer Integer Integer Integer Integer Integer Integer   | BLE Name 2 3 4 5 6 7 Bit 0 Bit 1 Bit 2 Bit 3 Bit 4 Bit 5 ~ Bit 15 0 1         | String         Allowed characters: &()/0123456789:ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]_abcdefghijklmnopqrstuvwxyz         RS Port Configuration         8N1 (8 bits Data, Parity NONE, 1 bit Stop)         8N2 (8 bits Data, Parity NONE, 2 bit Stop)         8E1 (8 bits Data, Parity EVEN, 1 bit Stop)         8E2 (8 bits Data, Parity EVEN, 2 bit Stop)         8O1 (8 bits Data, Parity ODD, 1 bit Stop)         8O2 (8 bits Data, Parity ODD, 1 bit Stop)         Button Status         Down { 0 = "Not Pressed", 1 = "Pressed" }         Up { 0 = "Not Pressed", 1 = "Pressed" }         Enter { 0 = "Not Pressed", 1 = "Pressed" }         Esc { 0 = "Not Pressed", 1 = "Pressed" }         Not Used         IPR96D1 Out of Service Relay         NONE         AUX2         Modbus Command   |
| F6410<br>F6414<br>F6619<br>F7012<br>F7041 | String  Integer  Integer  Integer  Integer  Integer  Integer  Integer  | BLE Name 2 3 4 5 6 7 Bit 0 Bit 1 Bit 2 Bit 3 Bit 4 Bit 5 ~ Bit 15 0 1 0       | String         Allowed characters: &()/0123456789:ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]_abcdefghijklmnopqrstuvwxyz         RS Port Configuration         8N1 (8 bits Data, Parity NONE, 1 bit Stop)         8N2 (8 bits Data, Parity NONE, 2 bit Stop)         8E1 (8 bits Data, Parity EVEN, 1 bit Stop)         8E2 (8 bits Data, Parity EVEN, 2 bit Stop)         8O1 (8 bits Data, Parity EVEN, 2 bit Stop)         8O2 (8 bits Data, Parity ODD, 1 bit Stop)         8O2 (8 bits Data, Parity ODD, 1 bit Stop)         Button Status         Down {0 = "Not Pressed", 1 = "Pressed" }         Up {0 = "Not Pressed", 1 = "Pressed" }         Enter {0 = "Not Pressed", 1 = "Pressed" }         Exc {0 = "Not Pressed", 1 = "Pressed" }         Not Used         IPR96D1 Out of Service Relay         NONE         AUX2         Modbus Command         LOCAL  |
| F6410<br>F6414<br>F6619<br>F7012<br>F7041 | String Integer Integer Integer Integer Integer Integer Integer Integer Integer   | BLE Name 2 3 4 5 6 7 Bit 0 Bit 1 Bit 2 Bit 3 Bit 4 Bit 5 ~ Bit 15 0 1 0 1 0 1 | String         Allowed characters: &()/0123456789:ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]_abcdefghijklmnopqrstuvwxyz         RS Port Configuration         8N1 (8 bits Data, Parity NONE, 1 bit Stop)         8N2 (8 bits Data, Parity NONE, 2 bit Stop)         8E1 (8 bits Data, Parity EVEN, 1 bit Stop)         8E2 (8 bits Data, Parity EVEN, 2 bit Stop)         8C2 (8 bits Data, Parity EVEN, 2 bit Stop)         8O1 (8 bits Data, Parity ODD, 1 bit Stop)         8O2 (8 bits Data, Parity ODD, 1 bit Stop)         Button Status         Down {0 = "Not Pressed", 1 = "Pressed" }         Up {0 = "Not Pressed", 1 = "Pressed" }         Enter {0 = "Not Pressed", 1 = "Pressed" }         Exc {0 = "Not Pressed", 1 = "Pressed" }         Not Used         IPR96D1 Out of Service Relay         NONE         AUX2         Modbus Command         LOCAL         REMOTE 485   |
| F6410<br>F6414<br>F6619<br>F7012<br>F7041 | String Integer   | BLE Name 2 3 4 5 6 7 7 Bit 0 Bit 1 Bit 2 Bit 3 Bit 4 Bit 5 ~ Bit 15 0 1 0 1 2 | String         Allowed characters: &()/0123456789:ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]_abcdefghijklmnopqrstuvwxyz         RS Port Configuration         8N1 (8 bits Data, Parity NONE, 1 bit Stop)         8N2 (8 bits Data, Parity NONE, 2 bit Stop)         8E1 (8 bits Data, Parity EVEN, 1 bit Stop)         8E2 (8 bits Data, Parity EVEN, 2 bit Stop)         8O1 (8 bits Data, Parity EVEN, 2 bit Stop)         8O2 (8 bits Data, Parity ODD, 1 bit Stop)         8O2 (8 bits Data, Parity ODD, 1 bit Stop)         8O2 (8 bits Data, Parity ODD, 1 bit Stop)         Button Status         Down {0 = "Not Pressed", 1 = "Pressed" }         Up {0 = "Not Pressed", 1 = "Pressed" }         Enter {0 = "Not Pressed", 1 = "Pressed" }         Enter {0 = "Not Pressed", 1 = "Pressed" }         Esc {0 = "Not Pressed", 1 = "Pressed" }         Not Used         IPR96D1 Out of Service Relay         NONE         AUX2         Modbus Command         LOCAL       REMOTE 485         REMOTE 8LE  |
| F6410<br>F6414<br>F6619<br>F7012<br>F7041 | String Integer   | BLE Name 2 3 4 5 6 7 Bit 0 Bit 1 Bit 2 Bit 3 Bit 4 Bit 5 ~ Bit 15 0 1 0 1 2 3 | String         Allowed characters: &()/0123456789:ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]_abcdefghijklmnopqrstuvwxyz <b>RS Port Configuration</b> 8N1 (& bits Data, Parity NONE, 1 bit Stop)         8N2 (& bits Data, Parity NONE, 2 bit Stop)         8E1 (& bits Data, Parity VENE, 2 bit Stop)         8E2 (& bits Data, Parity VENE, 2 bit Stop)         8O2 (& bits Data, Parity ODD, 1 bit Stop)         8O2 (& bits Data, Parity ODD, 1 bit Stop)         Button Status         Down { 0 = "Not Pressed", 1 = "Pressed" }         Function { 0 = "Not Pressed", 1 = "Pressed" }         Enter { 0 = "Not Pressed", 1 = "Pressed" }         Esc { 0 = "Not Pressed", 1 = "Pressed" }         Not Used         IPR96D1 Out of Service Relay         NONE         AUX2         Modbus Command         LOCAL         REMOTE 485         REMOTE 485 + BLE  |

| IPR96D1 COMMANDS<br>(F1200) |                        |          |             |  |  |  |  |  |
|-----------------------------|------------------------|----------|-------------|--|--|--|--|--|
| Command                     | Label                  | Password | Preset data |  |  |  |  |  |
| 0                           | No command             | no       |             |  |  |  |  |  |
| 1                           | Remote Reset           | Adv      |             |  |  |  |  |  |
| 4                           | Set BLE Name           | Adv      | x           |  |  |  |  |  |
| 5                           | Set Date and Time      | user     | x           |  |  |  |  |  |
| 9                           | Clear Events           | user     |             |  |  |  |  |  |
| 10                          | Operate Aux1           | Adv      |             |  |  |  |  |  |
| 11                          | Operate Aux2           | Adv      |             |  |  |  |  |  |
| 13                          | Set Access Code        | user     | x           |  |  |  |  |  |
| 29                          | Clear Maintenance Data | Adv      |             |  |  |  |  |  |

| IPR96D1 EVENTS                 |                            |      |  |  |  |  |  |  |
|--------------------------------|----------------------------|------|--|--|--|--|--|--|
| (F1215)<br>Category Event Code |                            |      |  |  |  |  |  |  |
|                                | Event                      | Code |  |  |  |  |  |  |
|                                | Events Clear               | 1    |  |  |  |  |  |  |
| GND_CURRENT_PROT               | Grid Timed 1 Overcurrent   | 2    |  |  |  |  |  |  |
| GND_CURRENT_PROT               | Gna Timea 1 Overcurrent    | 3    |  |  |  |  |  |  |
| GND_CURRENT_PROT               | Gna Timea2 Overcurrent     | 4    |  |  |  |  |  |  |
| SYSTEM                         | Breaker Failure            | 5    |  |  |  |  |  |  |
|                                | Digital Input 1 Depative   | 0    |  |  |  |  |  |  |
|                                | Digital Input 1 Deactive   | /    |  |  |  |  |  |  |
|                                | Digital Input 1 Active     | 8    |  |  |  |  |  |  |
|                                | Digital Input 2 Deactive   | 9    |  |  |  |  |  |  |
|                                |                            | 10   |  |  |  |  |  |  |
| DIGITAL_INPUT                  |                            | 11   |  |  |  |  |  |  |
|                                |                            | 12   |  |  |  |  |  |  |
|                                | Breaker Status Opened      | 13   |  |  |  |  |  |  |
|                                | Breaker Status Closed      | 14   |  |  |  |  |  |  |
|                                | Remote Reset               | 15   |  |  |  |  |  |  |
|                                |                            | 16   |  |  |  |  |  |  |
|                                | Aux 1 Do Energized         | 17   |  |  |  |  |  |  |
|                                | Aux1 De-Energized          | 18   |  |  |  |  |  |  |
|                                |                            | 19   |  |  |  |  |  |  |
| OUTPUT_RELAY                   |                            | 20   |  |  |  |  |  |  |
| OUTPUT_RELAY                   | Aux1 Energized             | 21   |  |  |  |  |  |  |
| OUTPUT_RELAY                   | Aux2 Energized             | 22   |  |  |  |  |  |  |
| OUTPUT_RELAY                   | Irip Remote De-Energized   | 23   |  |  |  |  |  |  |
| OUTPUT_RELAY                   | Aux1 Remote De-Energized   | 24   |  |  |  |  |  |  |
| OUTPUT_RELAY                   | Aux2 Remote De-Energized   | 25   |  |  |  |  |  |  |
| OUTPUT_RELAY                   | Trip Remote Energized      | 26   |  |  |  |  |  |  |
| OUTPUT_RELAY                   | Aux1 Remote Energized      | 27   |  |  |  |  |  |  |
| OUTPUT_RELAY                   | Aux2 Remote Energized      | 28   |  |  |  |  |  |  |
| SYSTEM                         | Default Setpoint           | 29   |  |  |  |  |  |  |
| SYSTEM                         | Setpoint Stored            | 30   |  |  |  |  |  |  |
| SYSTEM                         | Setpoint Discrepancy       | 31   |  |  |  |  |  |  |
| SYSTEM                         | Password Changed           | 32   |  |  |  |  |  |  |
| SYSTEM                         | Model Changed              | 33   |  |  |  |  |  |  |
| SYSTEM                         | Test BLE                   | 34   |  |  |  |  |  |  |
| SYSTEM                         | Trip Data Lost             | 35   |  |  |  |  |  |  |
| SYSTEM                         | Trip Data Restored         | 36   |  |  |  |  |  |  |
| SYSTEM                         | Calibration Time Data Lost | 37   |  |  |  |  |  |  |
| SYSTEM                         | Calibration Data Lost      | 38   |  |  |  |  |  |  |
| SYSTEM                         | Power Loss                 | 39   |  |  |  |  |  |  |
| SYSTEM                         | Aux Power Restored         | 40   |  |  |  |  |  |  |
| SYSTEM                         | Maintenance Data Cleared   | 41   |  |  |  |  |  |  |
| SYSTEM                         | Maintenance Data Lost      | 42   |  |  |  |  |  |  |
| SYSTEM                         | Maintenance Data Restored  | 43   |  |  |  |  |  |  |
| SYSTEM                         | Status Lost                | 44   |  |  |  |  |  |  |
| SYSTEM                         | BLE Failure                | 45   |  |  |  |  |  |  |
| SYSTEM                         | ADC Failure                | 46   |  |  |  |  |  |  |
| SYSTEM                         | Flash Busy                 | 47   |  |  |  |  |  |  |
| SYSTEM                         | Out of Service             | 48   |  |  |  |  |  |  |
| SYSTEM                         | Max Switch Current         | 49   |  |  |  |  |  |  |